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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,510	12/12/2003	Allan Svendsen	5618.520-US	2614

25908 7590 06/29/2005

NOVOZYMES NORTH AMERICA, INC.  
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NEW YORK, NY 10110

EXAMINER

SAIDHA, TEKCHAND

ART UNIT PAPER NUMBER

1652

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/734,510	Applicant(s) SVENDSEN ET AL.	
	Examiner Tekchand Saidha	Art Unit 1652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2005.  
 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) Group II (claims 86-104) is/are pending in the application.  
 4a) Of the above claim(s) Groups I & III-IX (claims 86-104) is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 87,91,95 and 99-101 is/are rejected.  
 7) ☒ Claim(s) 86-90,92-94,96-98 and 102-104 is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☒ All    b) ☐ Some \*    c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/273,871.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

*Handwritten signature/initials*

**DETAILED ACTION**

1. ***Election/Restriction***

Applicant's election with traverse of Group II (claims 86-104), filed May 10, 2005, drawn to a method of producing a modified phytase (435/196), wherein the modified phytase has phytase activity and a mutation is at one or more residues selected from a group consisting of: 71, 72, 73, 74, 75, 76, 77, 78, 81, 82, 84, 116, 117, 119 & 120, wherein each position corresponds to the position of amino acid sequence of the mature *P. lycii* phytase of SEQ ID NO: 7, feed/composition comprising phytase and a process of reducing phytate levels in animal manure, classified in class 424, subclass 94.6, is acknowledged. The traversal is on the ground(s) that no serious burden on the examiner if restriction were not required. Each of the nine designated inventions is classified in class 435, subclass 196. Furthermore, the same prior art would have to be considered in determining patentability of all claims.

This is not found persuasive, as explained in the prior Office Action. Typical search would involve not only commercial and sequence data bases and a close monitoring of the one or more phytase modification(s) corresponding to SEQ ID NO: 7, as compared to the numerous modification already known in the art. The search is even made harder by virtue of Applicants numbering system wherein each position correspond to mature *P. lycii* phytase of SEQ ID NO: 7. Hence an undue burden upon the Examiner to search the entire 128 positional modification, and further encompass single and multiple mutations, to be searched in one application. Contrary to Applicants' arguments, the prior art searched for mutational modifications at positions 71, 72, 73, 74, 75, 76, 77, 78, 81, 82, 84, 116, 117, 119 & 120, may not always yield prior art for the remaining claimed positions.

The requirement is still deemed proper and is therefore made FINAL.

2. **Claims withdrawn** :

Art Unit: 1652

Claims corresponding to Groups I & III-IX (different mutational positions) are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention, the requirement having been traversed.

3. ***Continuation of prior application***

When a non-provisional application claims the benefit under 35 USC 120 of a prior application, which in turn claims the benefit of a provisional application, the first sentence of the specification should read, e.g., "This application is a continuation of U.S. Application No. 08/-----, filed -----, now abandoned, which claims the benefit of U.S. Provisional Application No. 60/-----, filed -----." Also, the present status of all parent applications should be included.

While Applicants have listed data accurately, however, have not included the present status of the US Application No. 10/083,452, now US Patent 6,689,358; and US Application No. 09/273,871, now US Patent 6,514,495. Suitable amendment to the specification must be made to reflect this change.

4. ***Priority***

Acknowledgment is made of applicants claim for priority based on an applications filed in Denmark on 3/23/1998, 6/19/1998, 9/18/1998 & 1/22/1999.

Applicant's claim for domestic priority under 35 U.S.C. 119(e), for Provisional Application Nos. 60/080,129, 60/090,675, 60/101,642 and 60/117,677 filed March 31, 1998, June 25, 1998, September 24, 1998 and January 28, 1999, respectively, is also acknowledged.

5. ***Claim Objections***

Claims 86-87 are objected to because of the following informalities: Claims 86-87 recite non-elected subject matter [of Groups I & III-IX] which need to be deleted in response to this Office Action.. Appropriate correction is required.

6. ***Claim Rejections - 35 U.S.C. § 112*** (deposit requirement)

Claims 91, 95, 99-101 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

It is apparent that the [plasmid/microorganism/vector] is required to practice the claimed invention. As such the [plasmid/microorganism/vector] must be readily available or obtainable by a repeatable method set forth in the specification, or otherwise readily available to the public. If it is not so obtainable or available, the requirements of 35 U.S.C. 112, first paragraph, may be satisfied by a deposit of the [plasmid/microorganism/vector]. The specification lacks complete deposit information for the deposit of [plasmid/microorganism/vector]. If a deposit was made under the terms of the Budapest Treaty, then an affidavit or declaration by Applicants, or a statement by an attorney of record over his or her signature and registration number, stating that the instant invention will be irrevocably and without restriction released to the public upon the issuance of a patent, would satisfy the deposit requirement made herein. If a deposit has not been made under the Budapest Treaty, then in order to certify that the deposit meets the criteria set forth in 37 CFR 1.801-1.809 and MPEP 2402-2411.05, Applicant may provide assurance of compliance by affidavit or declaration, or by a statement by an attorney of record over his or her signature and registration number showing that (a) during pendency of the application, access to the invention will be afforded to the Commissioner upon request, (b) all restrictions upon availability to the public will be irrevocable removed upon granting of the patent, (c) the deposit will be maintained in a public depository for a period of 30 years, or 5 years after the last request or for the enforceable life of the patent, whichever is longer, (d) a test of the viability of the biological material at the time of deposit (see 37 CFR 1.807) and (e) the deposit will be replaced if it should ever become inviable.

Claims 91, 95, 99-101 are rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth in the objection to the specification.

It is not clear as to the public availability of microbial strain or catalog reference for CBS 116.46, 74338; NRRL B-21527; CBS 100231 & CBS100232.

If deposits have been made in accordance Budapest Treaty at a recognized depository; an affidavit or declaration [under 37 CFR 1.808] stating that : all restrictions upon availability to the public will be irrevocable removed upon granting of the patent, the deposit will be maintained in a public depository for a period of 30 years, or 5 years after the last request or for the enforceable life of the patent, whichever is longer, and the deposit will be replaced if it should ever become inviable.

7. ***Claim Rejections - 35 U.S.C. § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claim 87 is rejected under 35 U.S.C. 102(e) as being anticipated by Lassen et al. [U.S.P. 6,060,298]. Lassen et al. teach *Peniophora* phytase sequence (SEQ ID NO : 2) which is 100% to Applicants' SEQ ID NO : 7.

In Claim 87, there are 2 modified positions which read upon the native *Peniophora* phytase sequence disclosed by Lassen et al. because the modification/substitution is with the same amino acid present in the native sequence, amounting to no modification at all. The mutational positions are 75W (Trp) and 78S (Ser) corresponding to SEQ ID NO : 7. No difference is seen between the claimed modified sequence and that of the prior art. The reference anticipates the claim.

8. ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 87 is rejected under the judicially created doctrine of double patenting over claims 1-3 of U. S. Patent No. 6,060,298 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: Claim 87 is anticipated by claims 1-3 of U. S. Patent No. 6,060,298, as explained above in the 102 rejection.

9. Claims 88-90, 92-94, 96-98 & 102-104 are objected to as being dependent upon an objected/rejected base claim, but would be allowable if

Art Unit: 1652

rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. No claim is allowed

11. Status of the claims:

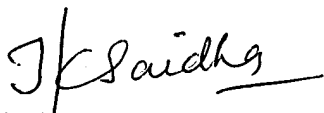
Claims 87, 91, 95 & 99-101 are rejected.

Claims 86-90, 92-94, 96-98 & 102-104 are objected.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tekchand Saidha whose telephone number is (571) 272 0940. The examiner can normally be reached on 8.30 am - 5.00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapu Achutamurthy can be reached on (571) 272 0928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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June 10, 2005